CLAIMS:

1. Block brake device (1) of a bogie (2) of a rail vehicle containing two wheel sets (4) with two wheels (6) respectively as well as two brake beams (10, 12) each assigned to a wheel axle (22) and extending parallel to the latter, which brake beams carry brake blocks (14) and are mutually connected by way of pressing rods (8) which can be actuated by at least one pressure-medium operated cylinder piston drive (20a, 20b) for the braking engagement of the brake blocks (14) with assigned braking areas of the wheels (6),
characterized in that at least a portion of a brake beam (10) directly forms the cylinder (46) of the cylinder piston drive (20a, 20b).

2. Block brake device according to Claim 1, characterized in that a cylinder face (48) of the cylinder (46) is formed directly by an inner circumferential surface of the wall (50) of the brake beam (10) or by a cylinder lining carried by the wall (10).

3. Block brake device according to Claim 2, characterized in that two coaxial cylinder piston drives (20a, 20b) which operate in opposite directions are integrated in the brake beam (10).

4. Block brake device according to Claim 3, characterized in that the brake beam (10) has two identically constructed housing halves (52) which can be symmetrically folded over with respect to a center plane of the bogie (2) and which, at least in sections, form the cylinders (46) of the cylinder piston drives (20a, 20b).

5. Block brake device according to Claim 4, characterized in that the two housing halves (52) are constructed as hollow castings.

6. Block brake device according to Claim 4 or 5, characterized in that one deflection gearing (86) respectively for deflecting the piston movement to the pressing rods (8) is accommodated in an encapsulated manner in the housing halves (52).

7. Block brake device according to Claim 6, characterized in that the deflection gearing is formed by one angle lever (86) respectively linked to a housing half (52).

8. Block brake device according to Claim 7, characterized in that receiving devices (38) for brake blocks (14) are shaped at the end side to the housing halves (52).

9. Block brake device according to one of Claims 4 to 8, characterized in that an intermediate housing (66) is arranged between the two housing halves (52), in which intermediate housing (66) a central pressure medium connection (70) is constructed which supplies both cylinders (46) of the cylinder piston drives (20a, 20b) with pressure medium.

10. Block brake device according to Claim 9, characterized in that at least a part of the driving mechanism (100) of a parking brake is accommodated in the intermediate housing (66).

11. Block brake device according to Claim 10, characterized in that the driving mechanism (100) of the parking brake comprises a nut screw drive (102) which can be rotatorily driven by parking brake actuating elements and is coaxial to the cylinder piston drives (20a, 20b), the screw (104) being constructed such that it can strike against the pressure side of one piston (75a) and the nut (106) being constructed such that it can strike against the pressure side of the other piston (74b).

12. Block brake device according to Claim 11, characterized in that the introduction of the rotating movement takes place into the nut (106) of the nut screw drive (102) and in that the screw (104) is disposed in a linearly displaceable manner and protected against torsion on the one piston (74a), and the nut (106) is disposed so that it can be linearly displaced but is freely rotatable on the other piston (74b).

13. Block brake device according to Claim 12, characterized by a guidance of the screw (104) and the nut (106) within one centric cup-shaped shaped-out section (76) respectively in the assigned piston (74a, 74b).

14. Block brake device according to Claim 13, characterized in that the screw (104) and the nut (106) are provided at the end side with one stop body (134a, 134b) respectively shaped complementarily to a bottom (152) of the shaped-out sections (76) of the pistons (74a, 74b).

15. Block brake device according to Claim 14, characterized in that the nut (106) of the nut screw drive (102) is disposed in an axially displaceable and co-rotatable manner inside a sleeve (126) which is disposed in the intermediate housing (66) in a coaxial, axially fixed and rotatable manner, which sleeve (126) can be rotatorily driven for the application and release of the parking brake.

16. Block brake device according to one of Claims 1 to 15, characterized in that it is fastened as a brake module containing at least the brake beams (10, 12), the pressing rods (8), the brake blocks (14) and the cylinder piston drives (20a, 20b) in a hanging manner by means of hanging lugs (18) to the bogie (2).

17. Block brake device according to Claim 16, characterized in that the hanging lugs (18) are disposed at one end side at the bogie (2) by means of spherical bearings (24) with elastically damping elements (26), so that they can be swivelled on all sides and are linked at the other end side to the brake shoes (16) carrying the brake blocks (14).

18. Block brake device according to one of Claims 1 to 17, characterized in that wear adjusting devices are integrated in the pressing rods (8).

19. Block brake device according to one of Claims 1 to 18, characterized in that the pressing rods (8) are arranged essentially perpendicular to the wheel axles (22).

20. Block brake device according to one of Claims 1 to 18, characterized in that the pressing rods (8) are arranged at an angle to one another and diverge starting from the brake beam (10) accommodating the cylinder piston drives (20a, 20b).

21. Block brake device according to one of the preceding claims, characterized in that the piston stroke of a cylinder piston drive (20a, 20b) is large in comparison to its diameter.